

What we claim and desire to secure by Letters Patent is:

1. An input unit arrangement with a mouse function mode and an input function mode, comprising an image-recording device for recording images and a signal-processing device for processing the images to achieve the mouse function mode and the input function mode, characterized in that the input unit arrangement is arranged to switch from the input function mode to the mouse function mode when the signal-processing device detects a predetermined position-coding pattern in one of said images.

2. An input unit arrangement according to claim 1, which is arranged to switch from the mouse function mode to the input function mode when the signal-processing device detects a different pattern to the predetermined position-coding pattern in one of said images.

3. An input unit arrangement according to claim 1, which in the mouse function mode is arranged to generate, on the basis of the predetermined position-coding pattern, signals for positioning a cursor on a display.

4. An input unit arrangement according to claim 1, wherein the predetermined position-coding pattern is a first subset of an absolute position-coding pattern and codes a plurality of positions, and wherein the input unit arrangement is arranged to carry out the switching from the input function mode to the mouse function mode

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(continued claim 4)

when the signal-processing device detects one of said plurality of positions on the basis of the predetermined position-coding pattern.

5. An input unit arrangement according to claim 4, which is arranged to switch from the mouse function mode to the input function mode when the signal-processing device detects a position which is coded by a second subset of the absolute position-coding pattern.

6. An input unit arrangement according to claim 4, wherein the first subset of the absolute position-coding pattern is divided into at least two regions and wherein the input unit arrangement is arranged to carry out different partial functions depending upon which of said at least two regions the signal-processing device detects.

7. An input unit arrangement according to claim 4, wherein the absolute position-coding pattern codes absolute positions on a virtual coordinate surface, and wherein there are defined on the virtual coordinate surface at least two unique regions which are each dedicated to a predetermined function mode or to a predetermined partial function within a function mode.

8. An input unit arrangement according to claim 7, which contains information about at least part of the virtual coordinate surface and is arranged to identify

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(continued claim 8)

the region which contains a position coded by a current image and to carry out the function mode or partial function which is associated with the identified region.

9. An input unit arrangement according to claim 1, wherein the mouse function mode comprises a relative mouse function.

10. An input unit arrangement according to claim 1, wherein the mouse function mode comprises an absolute mouse function.

11. An input unit arrangement according to claim 1, wherein the mouse function mode comprises a scrolling function.

12. An input unit arrangement according to claim 1, wherein the mouse function mode comprises a control function, in which commands are generated to an electronic unit communicating with the input unit arrangement for controlling the same.

13. An input unit arrangement according to claim 1, wherein the input function mode comprises a scanner function, such as an image or text inputting function.

14. An input unit arrangement according to claim 1, wherein the input function mode comprises a photographing function.

15. An input unit arrangement according to claim 1, wherein the input function mode comprises a handwriting recording function.

16. An input unit arrangement with a mouse function mode comprising an image-recording device for recording images and a signal-processing device for processing the images to achieve the mouse function mode, c h a r a c - t e r i z e d in that the signal-processing device is arranged to detect part of an absolute position-coding pattern in one of said images, determine a position based on the detected part, and establish to which of at least two regions the position belongs, the input unit arrangement being arranged to carry out different functions depending on which region the signal-processing device establishes.

17. An input unit arrangement according to claim 16, which is arranged to generate a command for controlling an electronic device communicating with the input unit arrangement when it detects a first of said at least two regions.

18. An input unit arrangement according to claim 17, wherein said command is a command for executing software on the electronic device.

19. An input unit arrangement according to claim 16, which is arranged to execute a relative mouse function when the signal-processing device detects a position within a region dedicated to relative mouse function and an absolute function when the signal-processing device detects a position within a region dedicated to absolute mouse function.

20. An input unit arrangement according to claim 19, which, for executing the relative and the absolute mouse function, is arranged to generate, on the basis of the absolute position-coding pattern, signals for positioning a cursor on a display.

21. An input unit arrangement according to claim 16, which is arranged to execute a scrolling function when the signal-processing device detects a position within a region dedicated to scrolling function.

22. An input unit arrangement with at least a first and a second function, comprising an image-recording device for recording images and a signal-processing device (20, 210) for processing the images, characterized in that the input unit arrangement is arranged to switch from the first function to the second function when the signal-processing device detects a predetermined position-coding pattern in one of said images.

23. An input unit arrangement according to claim 22, wherein the signal-processing device is designed to process the images to achieve at least one of said functions.

24. A mouse pad provided with a position-coding pattern, characterized in that the position-coding pattern on the mouse pad is divided into at least two regions which are intended to achieve different functions of an input unit arrangement.



(continued claim 31)

cessing the images, characterised in that the input unit arrangement automatically switches from the first function to the second function, when the signal-processing device detects a predetermined position-coding pattern in one of said images.

32. A method according to claim 31, wherein at least one of the functions is based on the images that are processed by the signal-processing device.

33. A method according to claim 31, wherein the input unit arrangement comprises several functions within the scope of a mouse function mode, the input unit arrangement being controlled between said functions by the signal-processing device detecting part of an absolute position-coding pattern in one of said images, determining a position on the basis of the detected part and establishing to which of said two regions the position belongs, the input unit arrangement being controlled to one of said functions in dependence on which region the signal-processing device establishes.

34. A method according to claim 33, wherein the input unit arrangement in at least one of said functions uses said position for controlling a cursor on a display.

35. A method according to claim 33, wherein the mouse function mode comprises at least one of the functions: a relative mouse function, an absolute mouse function, a scrolling function and a control function, in

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(continued claim 35)

which commands are generated to an electronic unit communicating with the input unit arrangement for controlling the same.

36. A method according to claim 31, wherein the input unit arrangement comprises a mouse function mode and an input function mode, the input unit arrangement automatically switching from the input function mode to the mouse function mode when the signal-processing device detects a predetermined position-coding pattern in one of said images.

37. A method according to claim 36, wherein the mouse function mode and the input function mode are at least partly based on the images processed by the signal-processing device.

38. A method according to claim 36, wherein the input unit arrangement is automatically switched from the mouse function mode to the input function mode when the signal-processing device detects a pattern other than the predetermined position-coding pattern in one of said images.

39. A method according to claim 36, wherein the predetermined position-coding pattern is a first subset of an absolute position-coding pattern and codes a plurality of positions, the input unit arrangement carrying out the switching from the input function mode to the mouse function mode when the signal-processing device detects one

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(continued claim 39)

of said plurality of positions on the basis of the pre-determined position-coding pattern.

40. A method according to claim 39, wherein the input unit arrangement in the mouse function mode at least partly uses the detected position for controlling a cursor on a display.

41. A method according to claim 39, wherein the input unit arrangement switches from the mouse function mode to the input function mode when the signal-processing device detects a position which is coded by a second subset of the absolute position-coding pattern.

42. A method according to claim 39, wherein the first subset of the absolute position-coding pattern is divided into at least two regions, the input unit arrangement being controlled to one of said functions in dependence on the region association of the position.

43. A method according to claim 36, wherein the input function mode comprises at least one of the functions: a scanner function, such as an image or text inputting function, a photographing function and a hand-writing recording function.